



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|------------------------------------|--------------------------------|------------------------|
| 09/594,405 | 06/15/2000 | Josephus Martinus Maria Van Gastel | PHN-17.489 | 9106 |
| 22428 7590 01/07/2008 FOLEY AND LARDNER LLP SUITE 500 3000 K STREET NW WASHINGTON, DC 20007 | | | EXAMINER TUGBANG, ANTHONY D | |
| | | | ART UNIT 3729 | PAPER NUMBER |
| | | | MAIL DATE 01/07/2008 | DELIVERY MODE PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/594,405

Applicant(s)

VAN GASTEL, JOSEPHUS
MARTINUS MARIA

Examiner

A. Dexter Tugbang

Art Unit

3729

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 October 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) 3-5 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 2 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. The applicant(s) response filed on October 29, 2007 has been fully considered and made of record.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action. The rejections are maintained for the reasons below and are repeated merely for the applicant(s) convenience.

Election/Restrictions

3. Claims 3 and 4 continue to stand as being withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on August 17, 2007.
4. Claims 5 and 6 continue to stand as being withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on March 16, 2006.

Claim Rejections - 35 USC § 103

5. Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Akatsuchi 5,086,559 in view of either Goedecke et al 5,191,702 or Shiota 6,101,709.

Akatsuchi discloses a machine comprising the following structure: a transport device (e.g. 4) for transporting printed circuit boards in an X-direction (see Fig. 1); at least one feeder (e.g. 7) with components P; a plurality of Y-slides (e.g. 8b) extending in a Y-direction

Art Unit: 3729

substantially perpendicular to the X-direction where each Y-slide is independently drivable in the X-direction; and a placement head (e.g. 10) connected to each Y-slide as each placement head moves together with the Y-slide when the Y-slide is driven in the X-direction.

The placement heads (e.g. 10) of Akatsuchi can move, and are independently drivable, in the X-direction by another slide (e.g. 8a)

Akatsuchi does not teach that each Y-slide has more than one, i.e. two, placement heads.

However, to add more than one placement head onto a Y-slide where each is independently drivable in the Y-direction is conventional and known in the art of mounting components on circuit boards.

In one example, Goedecke shows a Y-slide (e.g. 20a, 20b, 22a, 22b) with a plurality of placement heads (e.g. 30a, 30b, 36a, 36b, 37a, 37b) that are independently drivable in a Y-direction for placing a plurality of components on a plurality of circuit boards (col. 9, lines 35-45). Goedecke shows a transport device (e.g. 45 in Fig. 3) that transports a plurality of circuit boards in two rows in an X-direction (e.g. 49).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the Y-slide and transport device of Akatsuchi by including two placement heads on the Y-slide and transporting at least two rows of printed circuit boards, as taught by Goedecke, for the advantages placing more components on more circuit boards simultaneously at a much faster overall manufacturing rate.

In another example, Shiota shows a Y-slide (e.g. 22, in Fig. 1) that has two placement heads (e.g. 30) on the Y-slide where each placement head is independently drivable in the Y-direction to place components from different feeder areas (e.g. 11) onto the same circuit board.

Art Unit: 3729

It would have obvious to one of ordinary skill in the art at the time the invention was made to modified the method of Goedecke by adding a second placement head on the Y-slide that is independently drivable from the first placement head, in the Y-direction, as taught by Shiota, to have the ability to place more components onto the circuit board at a faster rate, compared to just having only one placement head on a Y-slide.

Response to Arguments

6. The applicant(s) arguments filed October 29, 2007 have been fully considered, but have not been deemed to be found as persuasive.

The applicant(s) argue that the prior art does not teach that the “at least two placement heads... the X-direction” (lines 7-9 of Claim 1). The applicant(s) believe that these limitations are not met by secondary references of Goedecke and Shiota, and are thus, not obvious to combine with the primary reference of Akatsuchi.

The examiner most respectfully disagrees. Goedecke and Shiota was each relied upon to show that two placement heads can be mounted on one, single Y-slide, whether the Y-slide is driven in the X-direction or not. The feature of driving the Y-slide in the X-direction is shown in Akatsuchi and the examiner's position is that in light of the teachings of both Goedecke and Shiota, another placement can be added to the Y-slide of Akatsuchi, which already has one placement head and is already drivable in the X-direction. Thus, the examiner maintains that the modification to Akatsuchi would be obvious in light of the teachings of Goedecke et al.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on

Art Unit: 3729

combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to /A. Dexter Tugbang/ whose telephone number is 571-272-4570. The examiner can normally be reached on Monday - Friday 7:30 am - 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on 571-272-4690. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3729

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

**/A. Dexter Tugbang/
Primary Examiner
Art Unit 3729**

January 2, 2008